

CAS 842-07-9

Substance name C.I. Solvent Yellow 14

Toxicity

C.I. Solvent Yellow 14 is listed as a carcinogen by the state of California.¹ The listing is based on evidence of dose-related liver cancer in rats but not mice.² Other studies indicate that C.I. Solvent Yellow 14 is genotoxic and that human metabolism would likely activate this chemical to form adducts with DNA.^{3,4}

Exposure

C.I. Solvent Yellow 14 is an azo dye and is used to color waxes, oils, solvents, polishes, cellulose ether varnishes and styrene resins.^{5,6} It was used as a food dye, called Sudan 1, and was common in certain curry and chili powders. The use of Sudan I in foods is now banned in many countries due to reports on its possible health risks.⁶ The Dutch government detected C.I. Solvent Yellow 14 in two plastic samples from toys likely to be sucked by children under 2 years old.⁷

References

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3. Westmoreland, C. and DG Gatehouse (1991) The differential clastogenicity of solvent yellow 14 and FD&C yellow No 6 in vivo in the rodent micronucleus test. *Carcinogenesis* 12(8): 1403-1407 .
4. Stiborova, M. et al. (2002) Sudan I is a potential carcinogen for humans. *Cancer Research* 62: 5678-84.
5. National Institutes of Health, National Library of Medicine Hazardous Substances Data Bank
<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB> Accessed May 2010.
6. WHO, International Agency for Research on Cancer (IARC) Monographs on the Evaluation of Carcinogenic Risks to Humans, Supplement No 7: Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42. 1987. Listed as Sudan 1.
7. Dutch Inspectorate for Health Protection and Veterinary Public Health (VWA/KvW). Screening of Plastic Toys for Chemical Composition and Hazards, Report ND05o610/01, July 2005.